

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Original) A data compression apparatus for data compressing at least a first and second digital information signal, each of the at least two digital information signals comprising subsequent samples, the apparatus comprising:

means for receiving the first and second digital information signal;

signal combination means for combining the first and second digital information signal to obtain a composite information signal;

data compression means for data compressing the composite information signal to obtain a data compressed composite information signal;

output means for supplying the data compressed composite

information signal, wherein the signal combination means comprises merging means for merging samples of the first and second digital information signal after each other into one datastream to obtain said composite information signal;

said data compression means having a control input for receiving a control signal, the data compression means being adapted to data compress the composite information signal in response to said control signal, control signal generation means being available for generating said control signal, said control signal generation means having an input for receiving said composite information signal and being adapted to generate said control signal in response to said composite information signal.

2.(Original) A data compression apparatus as claimed in claim 1, wherein said control signal is representative of a statistical parameter of the composite signal.

3.(Previously Presented) Apparatus as claimed in claim 1, for data compressing a number of n digital information signals, where

$n \geq 2$, characterized in that the signal combination means are adapted to cyclically merge one sample of each of the n digital information signals after each other into said composite information signal.

4.(Original) Apparatus as claimed in claim 1, characterized in that the data compression means comprise lossless compression means.

5.(Original) A data compression apparatus for data compressing at least a first and a second digital information signal, each of the at least two digital information signals comprising subsequent samples, the apparatus comprising:

means for receiving the first and second digital information signal;

signal combination means for combining the first and second digital information signal to obtain a composite information signal;

data compression means for data compressing the composite information signal so as to obtain a data compressed composite

information signal;

output means for supplying the data compressed composite information signal, wherein the signal combination means comprises merging means for merging samples of the first and second digital information signal after each other into one datastream to obtain said composite information signal;

said data compression means having a control input for receiving a control signal, the data compression means being adapted to data compress the composite information signal in response to said control signal, control signal generation means being available, for generating said control signal, said control signal generation means having an input for receiving said composite information signal and being adapted to generate said control signal in response to said composite information signal;

said data compression means comprising lossless compression means; and

said data compression apparatus further comprising prediction means for carrying out a prediction step on the composite information signal to obtain a residual composite signal, the

lossless compression means being adapted to carry out a lossless compression step on the residual composite signal to obtain said data compressed composite information signal.

6.(Original) Apparatus as claimed in claim 4, characterized in that the lossless compression means comprise a Huffman type encoder or an arithmetic coder.

7.(Original) Transmitter for transmitting a data compressed digital information signal via a transmission medium, wherein the transmitter comprises the data compression apparatus as claimed in claim 1, the transmitter further comprising means for applying the data compressed composite information signal to the transmission medium.

8.(Original) Transmitter as claimed in claim 7, wherein the transmitter further comprises error correction encoding means and/or channel encoding means, for error correction encoding and/or channel encoding the data compressed composite information signal

prior to applying the data compressed composite information signal to the transmission medium.

9.(Original) Transmitter as claimed in claim 7, which is in the form of a recording apparatus for recording the data compressed composite information signal in a track on a record carrier, comprising writing means for writing the data compressed composite information signal on the record carrier.

10.(Currently Amended) A data expansion apparatus for data expanding a data compressed composite information signal obtained from at least a first digital information signal and a second digital information signal, formed from the merging of samples of the first and second digital information signal after each other, the apparatus comprising:

input means for receiving the data compressed composite information signal;

data expansion means for data expanding the data compressed composite information signal to obtain a data expanded composite

information signal;

retrieval means for retrieving a replica of the first and second digital information signal from the data expanded composite information signal; and

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal.

11. (Currently Amended) A data expansion apparatus ~~as claimed in claim 10,~~ for data expanding a data compressed composite information signal obtained from at least a first digital

information signal and a second digital information signal, formed from the merging of samples of the first and second digital information signal after each other, the apparatus comprising:

input means for receiving the data compressed composite information signal;

data expansion means for data expanding the data compressed composite information signal to obtain a data expanded composite information signal;

retrieval means for retrieving a replica of the first and second digital information signal from the data expanded composite information signal; and

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response

to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal, wherein said control signal is representative of a statistical parameter of the data expanded composite signal.

12. (Currently Amended) ~~Apparatus as claimed in claim 10, A~~
data expansion apparatus for data expanding a data compressed composite information signal obtained from a number of n digital information signals, where $n \geq 2$, characterized in that the n digital information signals including a first digital information signal and a second digital information signal, formed from the merging of samples of the first and second digital information signal after each other, the apparatus comprising:

input means for receiving the data compressed composite information signal;

data expansion means for data expanding the data compressed composite information signal to obtain a data expanded composite information signal;

retrieval means for retrieving a replica of the first and second digital information signal from the data expanded composite information signal; and

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal;

wherein the retrieval means are adapted to cyclically retrieve one sample of each of the n digital information signals after each other from said data expanded composite information signal.

13. (Currently Amended) ~~Apparatus as claimed in claim 10,~~

characterized in that A data expansion apparatus for data expanding a data compressed composite information signal obtained from at least a first digital information signal and a second digital information signal, formed from the merging of samples of the first and second digital information signal after each other, the apparatus comprising:

input means for receiving the data compressed composite information signal;

data expansion means for data expanding the data compressed composite information signal to obtain a data expanded composite information signal;

retrieval means for retrieving a replica of the first and second digital information signal from the data expanded composite information signal; and

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal;

wherein the data expansion means comprise lossless expansion means.

14. (Previously Presented) A data expansion apparatus for data expanding a data compressed composite information signal obtained from at least a first and a second digital information signal, the apparatus comprising:

input means for receiving the data compressed composite information signal;

data expansion means for data expanding the data compressed composite information signal to obtain a data expanded composite information signal;

retrieval means for retrieving a replica of the first and

second digital information signal from the data expanded composite information signal;

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal;

said data expansion means comprising lossless expansion means; and said data expansion apparatus further comprising prediction means for carrying out a prediction step on the signal supplied by the lossless expansion means to obtain said data expanded composite information signal.

15. (Original) Receiver for receiving a data compressed composite information signal from a transmission medium, wherein the receiver comprises the data expansion apparatus as claimed in claim 10, the receiver further comprising receiver means for receiving the data compressed composite information signal from the transmission medium.

16. (Currently Amended) ~~Receiver as claimed in claim 15,~~
~~wherein the receiver further comprises~~ A receiver for receiving a
data compressed composite information signal from a transmission
medium, wherein the receiver comprises a data expansion apparatus
for data expanding a data compressed composite information signal
obtained from at least a first digital information signal and a
second digital information signal, formed from the merging of
samples of the first and second digital information signal after
each other, the data expansion apparatus comprising:

input means for receiving the data compressed composite
information signal;

data expansion means for data expanding the data compressed

composite information signal to obtain a data expanded composite information signal;

retrieval means for retrieving a replica of the first and second digital information signal from the data expanded composite information signal; and

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal;

the receiver further comprising:

receiver means for receiving the data compressed composite information signal from the transmission medium; and

channel decoding means and/or error correction means, for channel decoding and/or error correcting the data compressed composite information signal prior to data expanding the data compressed composite information signal.

17. (Currently Amended) ~~Receiver as claimed in claim 15, which~~
A receiver for receiving a data compressed composite information signal from a transmission medium, wherein the receiver comprises a data expansion apparatus for data expanding a data compressed composite information signal obtained from at least a first digital information signal and a second digital information signal, formed from the merging of samples of the first and second digital information signal after each other, the data expansion apparatus comprising:

input means for receiving the data compressed composite information signal;

data expansion means for data expanding the data compressed composite information signal to obtain a data expanded composite information signal;

retrieval means for retrieving a replica of the first and second digital information signal from the data expanded composite information signal; and

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal;

the receiver further comprising receiver means for receiving the data compressed composite information signal from the transmission medium;

wherein the receiver is in the form of a reproducing apparatus for reproducing the data compressed composite information signal

from a track on a record carrier, ~~comprising and further comprises~~
reading means for reading the data compressed composite information
signal from the record carrier.

18.(Original) A method of data compressing at least a first
and second digital information signal, each of the at least two
digital information signals comprising subsequent samples, the
method comprising the steps of:

receiving a composite information signal having samples of the
first and second digital information signal merged after each other
into one datastream;

generating a control signal form said composite information
signal;

data compressing the composite information signal in response
to said control signal to obtain a data compressed composite
information signal; and

supplying the data compressed composite information signal.

19.(Original) The method of claim 18, characterized in that

the receiving step comprises the substeps of

receiving the first and second digital information signal,
merging the samples of the first and second digital
information signal after each other into one datastream so as to
obtain said composite information signal.

20. (Previously Presented) A method of data expanding a data
compressed composite information signal obtained from at least a
first and second digital information signal, the method comprising
the steps of:

receiving the data compressed composite information signal;
data expanding the data compressed composite information
signal in response to a control signal to obtain a data expanded
composite information signal, the data expanded composite
information signal comprising samples of the first and second
digital information signal merged after each other into one
datastream.

21. (Original) The method of claim 20, further characterized

by the steps of retrieving individual samples from the data expanded composite signal so as to obtain replicas of the at least first and second digital information signals, supplying the replicas of at least the first and second digital information signals.

22. (Original) Record carrier obtained with the transmitter as claimed in claim 9, comprising the data compressed composite signal recorded in a track on said record carrier.

23. (Currently Amended) ~~The data expansion apparatus of claim 10,~~ A data expansion apparatus for data expanding a data compressed composite information signal obtained from at least a first digital information signal and a second digital information signal, formed from the merging of samples of the first and second digital information signal after each other, the apparatus comprising:
input means for receiving the data compressed composite information signal;
data expansion means for data expanding the data compressed

composite information signal to obtain a data expanded composite information signal;

retrieval means for retrieving a replica of the first and second digital information signal from the data expanded composite information signal; and

output means for supplying the replicas of at least the first and second digital information signals, wherein the retrieval means are adapted to retrieve individual samples from the data expanded composite signal to obtain said replicas of the at least first and second digital information signals;

said data expansion means having a control input for receiving a control signal, the data expansion means being adapted to data expand the data compressed composite information signal in response to said control signal to obtain said data expanded composite information signal, control signal generation means being available, for generating said control signal;

wherein the control signal generation means include an input for receiving said data expanded composite information signal and generate the control signal in response to the data expanded

composite information signal.

24. (Previously Presented) The data expansion apparatus of claim 14, wherein the control signal generation means include an input for receiving said data expanded composite information signal and generate the control signal in response to the expanded composite information signal.

25. (Currently Amended) ~~The method of claim 20, wherein the method further comprises the step of~~ A method of data expanding a data compressed composite information signal obtained from at least a first and second digital information signal, the method comprising the steps of:

receiving the data compressed composite information signal;
data expanding the data compressed composite information signal in response to a control signal to obtain a data expanded composite information signal, the data expanded composite information signal comprising samples of the first and second digital information signal merged after each other into one

datastream; and

generating the control signal from the data expanded composite information signal.